https://truckmanualshub.com/

SANY®

Quality Changes the World

SPC400E

SANY Truck-mounted Crane
40 Ton Lifting Capacity

Max. Lifting capacity: 40t
Max. Boom Length: 35m
Max. Lifting Height: 43m

https://truckmanualshub.com/

Ultra long, super strong and highly sensitive load lifting capacity

- Four section boom of high strength steel structure and optimized U-shaped cross section reduces weight significantly with higher safety rates. Jib mounting angles are 0°, 15°, and 30° which ensures fast and convenient change-over between different operating conditions so as to improving working efficiency of the machine.

Highly efficient, stable, energy-saving, and adjustable hydraulic system

- Quadruple pump, load feedback and constant power control are applied to provide strong lifting capacity and good micro-mobility. Unique steering buffer design is applied to ensure stable braking operation.

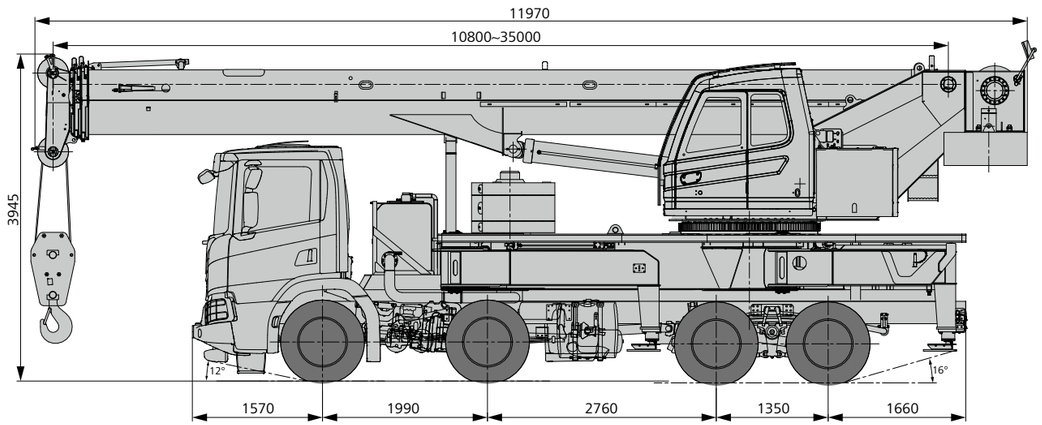
Safe, stable, advanced, and intelligent electric control system

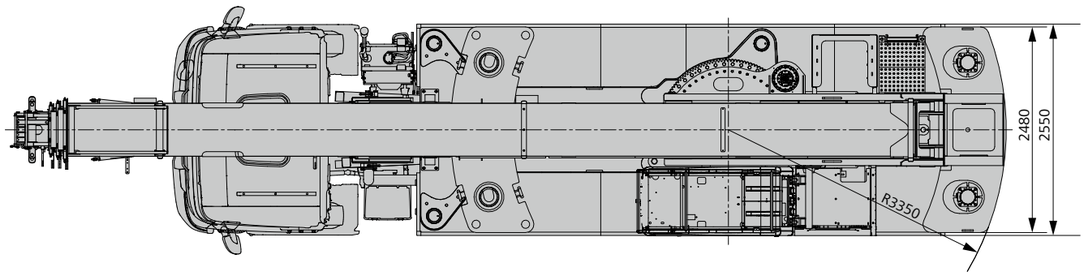
- IFM Self-developed controller CR0212 specially for engineering machinery is configured. The adoption of CAN-bus full-digital network control technology ensures stable control signal, simple harness, and high reliability. Timely feedback of data information can achieve the monitoring of the overall working status in real-time; the load moment limiter equipped with the comprehensive intelligent protection system is used with accuracy within 3% to provide a comprehensive logic and interlock control, thus ensuring more safe and reliable operation.

Quality Changes the World

https://truckmanualshub.com/

Overall Dimensions





Technical Parameters

Parameter	Item		Unit	Value
Weight parameters	Superstructure Overall weight		kg	26480(7.8t full CW)
				21480(2.8t fixed CW)
Main Performance Parameters	Max. rated capacity		t	40
	Min. rated working radius		m	3
	Tail slewing radius of swingtable		m	3.35
	Boom angle		°	-1.2~80
	Max.lifting moment	Base boom	kN.m	1372
		Full-extend boom	kN.m	819.3
		Full-extend boom+jib	kN.m	383
	Outrigger span (Longitudinal×Transversal)		m	6.8×6.6
	Boom length	Base boom	m	10.8
		Full-extend boom	m	35
		Full-extend boom+jib	m	43
		Jib	m	8
	Jib offset angle		°	0,15,30
Working speed	Max. single rope lifting speed of main winch (no load)		m/min	130
	Full extension/retraction time of boom		s	60/50
	Full lifting/descending time of boom		s	50/70
	Slewing speed		r/min	2.2
	Outrigger horizontal extension/retraction time		s	30/30
	Outrigger vertical extension/retraction time		s	35/40

https://truckmanualshub.com/

Crane Introduction

Cab

- It is made of anti-corrosion steel plate with ergonomic design such as full-coverage soften interior, panoramic sunroof and, adjustable seats etc., and humanized design providing more comfortable and relaxing operation experience. The display of load moment limiter integrates main console and operation display system, which clearly show the data of all operating superstructure conditions for lifting operation.

Hydraulic system

- High-quality key hydraulic components such as main oil pump, rotary pump, main valve, winch motor, and balancing parts etc. are adopted to achieve stable and reliable operation of the hydraulic system. Superior operation performance is guaranteed by accurate parameter matching.
- Main valve has flow compensation and load feedback control function, enabling stable and convenient control of single action and combined action under different operation conditions
- Winch adopts the electronically controlled variable motor to ensure high operation efficiency. Max. single line speeds of winches is up to 130m/min.
- Slewing system is equipped with the integrated slewing buffer valve to ensure more stable starting and control of the slewing operation and excellent micro-mobility.

Control system

- With fully security protection system, winches are equipped with over-roll out limiter and height limiters to prevent over-rolling out and over-hoisting of steel rope, including tip-over and limit angle protection.
- Load moment limiter: The adoption of high intelligent load moment limiter system can comprehensively protect lifting operation, ensuring accurate, stable and comfort operation.

The vice carrier frame

- Designed and manufactured by SANY, anti-torsion box structure is welded by fine-grain high-strength steel plate, to provide strong load bearing capacity.

Telescopic system

- 4-section boom is applied with basic boom length of 10.8m, full-extended boom length of 35.0m, jib (option) length of 8m and lifting height of fully extended boom length of 37.5m respectively. Max. lifting height is 42.5m including jib. It is made of fine grain high-strength steel with U-shaped cross section and with telescopic operation controlled independent by cylinder rope.

Luffing system

- Dead-weight luffing provides more stable luffing operation at low energy loss.
- Luffing angle:-1.2°~80°.

Slewing system

- 360° rotation can be achieved with Max. slewing speed of 2.2r/min. Hydraulic controlled proportional speed adjustment is applied to provide stable and reliable operation of the system. Unique rotary buffer design ensures more stable braking.

Counterweight

- Fixed counterweight 2800kg, flexible counterweight 1000kg+3000kg+1000kg.

Hoisting system

- The winch adopts the high-pressure automatic variable plunger motor enabling automatic switch-over between low load high speed mode and high load low speed mode, and ensuring highly efficient operation and stable lifting and lowering of the load.
- One main hook: 400Kg, and the Max. lifting loads are 40t. Wire rope of winch: left-handed wire rope 16-35W×7-1960USZ 200m.

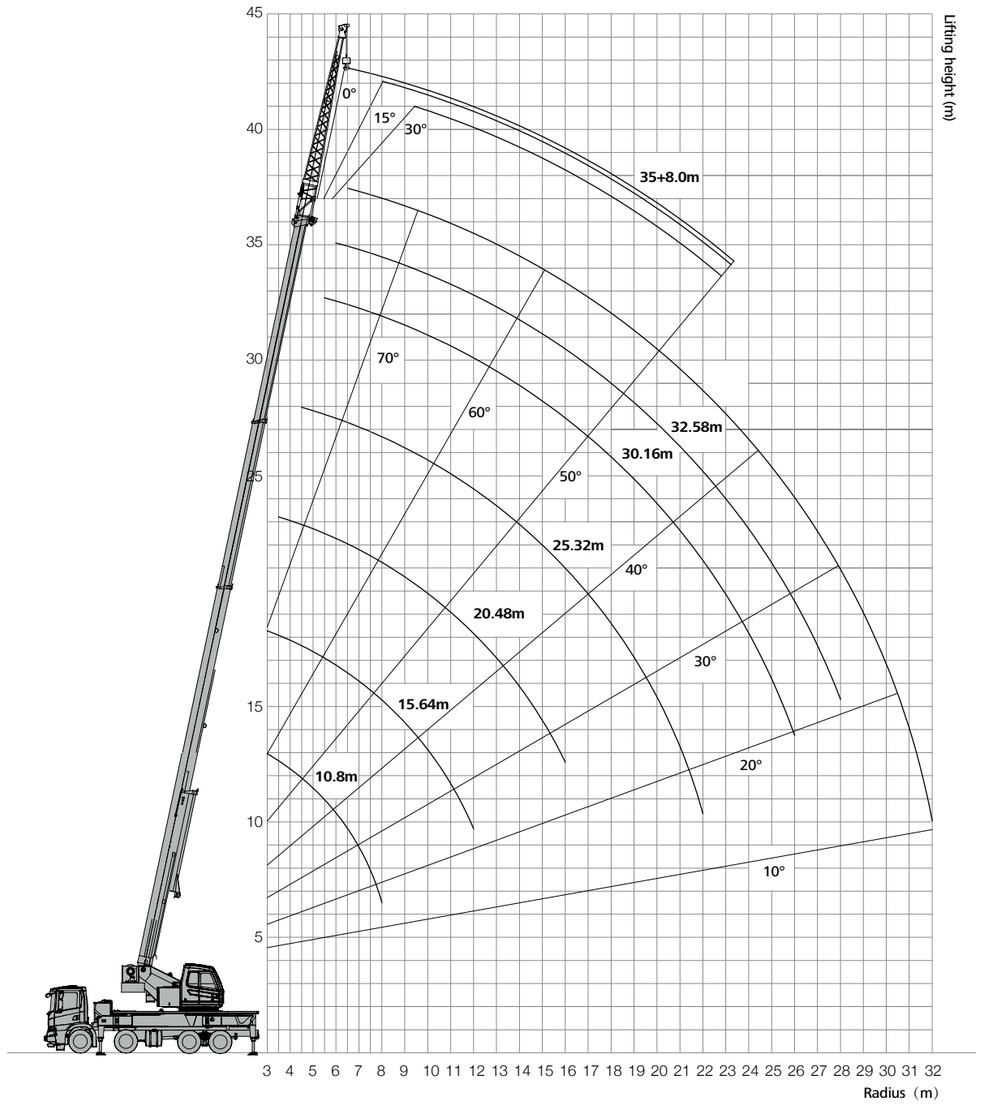
Safety system

- Load moment limiter: Load moment limiter calculation system based on lifting load mechanical model is established using an analytical mechanics method with rated lifting accuracy up to ±3% through on-line non-load calibration, providing full protection to lifting operation. In case of overload operation, system will automatically issue an alarm to provide safety protection for manipulation.
- Hydraulic system is configured with the balance valve, overflow valve and two-way hydraulic lock etc. components, thus achieving stable and reliable operation of the hydraulic system.
- Winch is equipped with over roll-out limiter to prevent over rolling-out of wire rope.
- Boom is equipped with height limiters respectively to prevent over-hoisting of wire rope.
- Boom head is equipped with anemometer and press sensor to indicate the working condition of whole crane in real-time, giving an alarm and cutting off the dangerous action automatically.

Outriggers

- Four-point supporting of the X-shaped outriggers ensures easy operation and strong stability with max. span up to 6.15m×6.15m. They are made of fine-grain high-strength steel sheet with horizontal single-cylinder rope line telescoping for first and second outriggers. Vertical cylinder of outrigger adopts bi- directional hydraulic locks to improve safety.

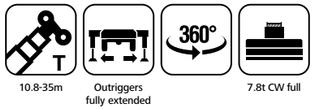
Boom Operating Range



https://truckmanualshub.com/

Load Chart - Telescopic Boom

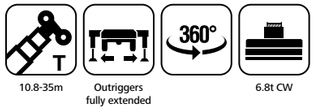
Unit: kg



Radius	10.8	15.64	20.48	25.32	30.16	32.58	35	Radius
3	40000	23000						3
3.5	36000	22000	20000					3.5
4	33000	21700	20000					4
4.5	31000	21400	20000	16500				4.5
5	28000	21200	20000	15800				5
5.5	25000	21000	20000	15000	11500			5.5
6	22500	20800	20000	14400	11000	9500		6
6.5	20500	20000	19500	13700	10800	9300	7600	6.5
7	18800	19200	18700	13000	10500	9200	7600	7
7.5	17000	18500	18000	12400	10200	9000	7600	7.5
8	15500	17800	17200	12000	9800	8800	7500	8
9		15200	15000	11000	9100	8200	7500	9
10		12800	12700	10200	8500	7600	7100	10
11		11000	11000	9600	7900	7100	6700	11
12		9400	9400	9000	7400	6700	6300	12
14			7500	7500	6500	6000	5600	14
16			6100	6200	5800	5400	5000	16
18				5100	5000	4900	4500	18
20				4300	4400	4500	4100	20
22				3600	3600	3600	3600	22
24					3100	3200	3200	24
26					2600	2700	2700	26
28						2200	2300	28
30							2000	30
32							1700	32
Rate	10	8	6	5	4	3	3	Rate

Load Chart - Telescopic Boom

Unit: kg



Radius	10.8	15.64	20.48	25.32	30.16	32.58	35	Radius
3	40000	23000						3
3.5	36000	22000	20000					3.5
4	33000	21700	20000					4
4.5	31000	21400	20000	16500				4.5
5	28000	21200	20000	15800				5
5.5	25000	21000	20000	15000	11500			5.5
6	22500	20800	20000	14400	11000	9500		6
6.5	20500	20000	19500	13700	10800	9300	7600	6.5
7	18800	19000	18500	13000	10500	9200	7600	7
7.5	17000	18000	17500	12400	10200	9000	7600	7.5
8	15500	16500	16000	12000	9800	8800	7500	8
9		14000	13800	11000	9000	8200	7500	9
10		11800	11600	10200	8300	7600	7100	10
11		10200	10000	9500	7800	7100	6700	11
12		8700	8800	8400	7300	6700	6300	12
14			6800	6600	6400	6000	5600	14
16			5500	5400	5300	5100	5000	16
18				4500	4400	4400	4300	18
20				3800	3800	3800	3800	20
22				3200	3200	3300	3300	22
24					2800	2800	2800	24
26					2400	2400	2400	26
28						2000	2000	28
30							1700	30
32							1400	32
Rate	10	8	6	5	4	3	3	Rate

https://truckmanualshub.com/

Load Chart - Telescopic Boom

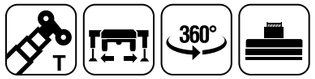
Unit: kg

10.8-35m | Outriggers fully extended | 3.8t CW

Radius	10.8	15.64	20.48	25.32	30.16	32.58	35	Radius
3	35500	23000						3
3.5	32000	22000	20000					3.5
4	29000	21700	20000					4
4.5	27000	21400	20000	16500				4.5
5	24500	21200	20000	15800				5
5.5	22500	21000	20000	15000	11500			5.5
6	21000	20800	19500	14400	11000	9500		6
6.5	20000	19500	18500	13700	10800	9300	7600	6.5
7	18000	18500	17500	13000	10500	9200	7600	7
7.5	15500	16500	16000	12400	10200	9000	7600	7.5
8	13500	14700	14500	12000	9800	8800	7500	8
9		12100	12200	11000	9000	8200	7500	9
10		10200	10300	10200	8300	7600	7100	10
11		8700	8800	8900	7700	7100	6700	11
12		7600	7600	7700	7200	6700	6300	12
14			5900	6000	6000	6000	5600	14
16			4700	4800	4800	4800	4800	16
18				3900	3900	4000	4000	18
20				3200	3200	3300	3300	20
22				2600	2700	2700	2700	22
24					2200	2200	2300	24
26					1700	1800	1800	26
28						1400	1500	28
30							1200	30
32							1000	32
Rate	10	8	6	5	4	3	3	Rate

Load Chart - Telescopic Boom

Unit: kg



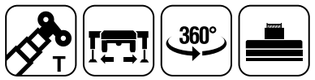
10.8-35m | Outriggers fully extended | 2.8t CW

Radius	10.8	15.64	20.48	25.32	30.16	32.58	35	Radius
3	35500	23000						3
3.5	32000	22000	20000					3.5
4	29000	21700	20000					4
4.5	27000	21400	20000	16500				4.5
5	24500	21200	20000	15800				5
5.5	22500	21000	20000	15000	11500			5.5
6	21000	20800	19500	14400	11000	9500		6
6.5	19500	19500	18500	13700	10800	9300	7600	6.5
7	17500	17500	17000	13000	10500	9200	7600	7
7.5	15000	16000	15600	12400	10200	9000	7600	7.5
8	13000	14400	14300	12000	9800	8800	7500	8
9		11800	12000	10800	8900	8200	7500	9
10		10000	10000	9900	8200	7600	7100	10
11		8500	8600	8600	7600	7100	6700	11
12		7100	7400	7400	7100	6700	6300	12
14			5600	5700	5700	5600	5600	14
16			4300	4400	4500	4500	4500	16
18				3600	3600	3600	3600	18
20				2800	2900	2900	2900	20
22				2300	2300	2400	2400	22
24					2000	2000	2000	24
26					1600	1600	1600	26
28						1200	1200	28
30							900	30
32							700	32
Rate	10	8	6	5	4	3	3	Rate

https://truckmanualshub.com/

Load Chart - Optional jib

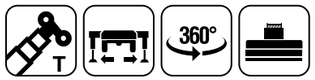
Unit: kg



10.8-35m | Outriggers fully extended | Full CW 7.8t

Boom angle(º)	Boom Length		35	Jib Length		8	Boom angle(º)
	0º		15º		30º		
	Load	Radius	Load	Radius	Load	Radius	
78	2800	8.9	2350	10.9	1700	12.6	78
75	2800	11.1	2200	13.1	1600	14.7	75
72	2750	13.3	2050	15.2	1500	16.8	72
70	2600	14.7	1900	16.6	1450	18.1	70
65	2150	18.2	1650	19.9	1350	21.3	65
60	1800	21.5	1450	23.2	1250	24.4	60
55	1300	24.7	1200	26.2	1150	27.3	55
50	950	27.6	850	29.1	800	30.0	50

Load Chart - Optional jib



10.8-35m | Outriggers fully extended | CW 6.8t

Boom angle(º)	Boom Length		35	Jib Length		8	Boom angle(º)
	0º		15º		30º		
	Load	Radius	Load	Radius	Load	Radius	
78	2800	8.9	2350	10.9	1700	12.6	78
75	2800	11.1	2200	13.1	1600	14.7	75
72	2750	13.3	2050	15.2	1500	16.8	72
70	2600	14.7	1900	16.6	1450	18.1	70
65	2150	18.2	1650	19.9	1350	21.3	65
60	1800	21.5	1450	23.2	1250	24.4	60
55	1250	24.7	1150	26.2	1050	27.3	55
50	850	27.6	800	29.1	700	30.0	50

https://truckmanualshub.com/

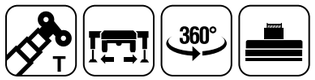
Load Chart - Optional jib

10.8-35m | Outriggers fully extended | CW 3.8t

Boom angle(º)	Boom Length		35	Jib Length		8	Boom angle(º)
	0º		15º		30º		
	Load	Radius	Load	Radius	Load	Radius	
78	2800	8.9	2350	10.9	1700	12.6	78
75	2800	11.1	2200	13.1	1600	14.7	75
72	2750	13.3	2050	15.2	1500	16.8	72
70	2600	14.7	1900	16.6	1450	18.1	70
65	2150	18.2	1650	19.9	1350	21.3	65
60	1800	21.5	1450	23.2	1200	24.4	60
55	1200	24.7	1100	26.2	950	27.3	55
50	750	27.6	650	29.1	650	30.0	50

Load Chart - Optional jib

Unit: kg



10.8-35m | Outriggers fully extended | 2.8t

Boom angle(º)	Boom Length		35	Jib Length		8	Boom angle(º)
	0º		15º		30º		
	Load	Radius	Load	Radius	Load	Radius	
78	2800	8.9	2350	10.9	1700	12.6	78
75	2800	11.1	2200	13.1	1600	14.7	75
72	2750	13.3	2050	15.2	1500	16.8	72
70	2600	14.7	1900	16.6	1450	18.1	70
65	2150	18.2	1650	19.9	1350	21.3	65
60	1800	21.5	1450	23.2	1200	24.4	60
55	1150	24.7	1100	26.2	900	27.3	55
50	650	27.6	600	29.1	600	30.0	50

https://truckmanualshub.com/

Sany Automobile Hoisting Machinery Co., Ltd.

No.168, Jinzhou Avenue, Jinzhou Development Zone, Changsha, Hunan, China
Postcode: 410600
Service: 0086-400 6098 318 Consulting: 400 8879 318
Email: crd@sany.com.cn

—Authorised Dealer—

Reminder:
For safe and reliable operation of the diesel engines, please fill Grade IV machines with Grade IV diesel and urea solution conforming to related national standards. Please refer to the operating instructions and related standards for details.

Any change in the technical parameters and configuration due to advancement in technology may occur without prior notice. The machine in the figures may include auxiliary equipment. This brochure is for reference only, and goods in kind shall prevail.
Copyright at Sany Heavy Industry. No part of this catalogue may be copied, recorded or used for any purpose without written approval from Sany Heavy Industry.

© Printed in January 2020 in China

www.sanyglobal.com